the like in any suitable amount. The dialysis solution may also include other constituents, such as buffers including lactate, bicarbonate, and/or the like, and other constituents, such as stabilizers.

It should be appreciated that the components of the dialysis solutions of the present invention can be housed or contained in any suitable manner such that the dialysis solutions can be effectively prepared and administered. In an embodiment, the present invention includes a multi-part dialysis solution in which two or more parts are formulated and stored separately, and then mixed just prior to use. A variety of containers can be used to house the various parts of the dialysis solution, such as separate containers (i.e., flasks, bags and the like) that are connected by a suitable fluid communication mechanism. An example of a multi-chamber container is set forth in U.S. Pat. No. 5,431,496, the disclosure of which is herein incorporated by reference. Another example of a multi-chamber container is set forth in U.S. Pat. No. 4,396,383, the disclosure of which is herein incorporated by reference. An example of a multi-chamber solution bag that includes a peel seal is disclosed in U.S. Pat. No. 6,319,243, the disclosure of which is herein incorporated by reference. Examples of peelable seals and containers using same can be found in U.S. Pat. No. 6,663,743 issued on Dec. 16, 2003, divisional of U.S. patent application Ser. No. 08/033,233 filed on Mar. 16, 1993 entitled "PEELABLE SEAL AND CONTAINER HAVING SAME", the disclosure of which is herein incorporated by reference.

It should be understood that various changes and modifications to the presently preferred embodiments described herein will be apparent to those skilled in the art. Such changes and modifications can be made without departing from the spirit and scope of the present invention and without diminishing its intended advantages. It is therefore intended that such changes and modifications be covered by the appended claims.

The invention is claimed as follows:

1. A membrane capable of removing excess nitric oxide, the membrane comprising a modified surface including a ligand attached thereto, the ligand including a nitronyl nitroxide monoradical.

2. The membrane of claim **1**, wherein the nitronyl nitroxide monoradical is selected from the group consisting of:

1,3-dihydroxy-2-(2,4-dihydroxyphenyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(3,4-dihydroxyphenyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(4-pyridyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(2-thienyl)-4,4,5,5-tetramethylimidazolidine; 1,3-Dihydroxy-2-(2-furyl)-4,4,5,-tetramethylimidazolidine; and

combinations thereof.

3. A dialysis solution comprising:

a composition including a pharmaceutically active agent selected from the group consisting of a nitronyl nitroxide monoradical, a B12 derivative, and combinations thereof, wherein the composition is capable of removing excess nitric oxide.

4. The dialysis solution of claim **3** wherein the nitronyl nitroxide monoradical is selected from the group consisting of:

1,3-dihydroxy-2-(2,4-dihydroxyphenyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(3,4-dihydroxyphenyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(4-pyridyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(2-thienyl)-4,4,5,5-tetramethylimidazolidine; 1,3-Dihydroxy-2-(2-furyl)-4,4,5,5-tetramethylimidazolidine; and combinations thereof.

5. The dialysis solution of claim **3** wherein the B12 derivative is selected from the group consisting of hydroxocobalamin, cyanocobalamin and combinations thereof.

6. The dialysis solution of claim **3** wherein the dialysis solution includes a peritoneal dialysis solution.

7. The dialysis solution of claim **6** wherein the peritoneal dialysis solution includes a plurality of solution parts.

8. A cartridge for removing uremic toxins, the cartridge comprising:

a bead material having a pharmaceutical agent attached thereto, the pharmaceutical agent comprising a nitronyl nitroxide monoradical, wherein the pharmaceutical agent is capable of removing an excess amount of nitric oxide at a cellular level without inhibiting nitric oxide synthesis.

9. The cartridge of claim **8**, wherein the nitronyl nitroxide monoradical is selected from the group consisting of:

1,3-dihydroxy-2-(2,4-dihydroxyphenyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(3,4-dihydroxyphenyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(4-pyridyl)-4,4,5,5-tetramethylimidazolidine;

1,3-dihydroxy-2-(2-thienyl)-4,4,5,5-tetramethylimidazolidine; 1,3-Dihydroxy-2-(2-furyl)-4,4,5,5-tetramethylimidazolidine;

and combinations thereof.

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